



Resources and Support for High-Precision Real-Time GNSS Networks

**CGSIC Surveying, Mapping, and
Geosciences Session – CORS Forum
September 25th, 2007 - Fort Worth, TX
Gavin Schrock, PLS**



On-Grid Goals and Objectives

“To develop, on the national level, a program to assist locally or regionally driven initiatives in the establishment, maintenance, and operation of real-time GPS infrastructure networks to serve the widest possible range of public and private sector interests”



On-Grid Goals and Objectives

Resources



Expertise



Policy Assistance



Cooperative Efforts



On-Grid

Goals and Objectives - NOT

Rules



Big Funding



Public Sector Only



Proprietary Solutions



Reference Stations





Rovers



On-Grid - Forums



- **American Congress Surveying & Mapping - ACSM**
- **National Society of Professional Surveyors - NSPS**
- **Real-Time Network (RTN) Administrators**
- **Local and State Industry Associations**
- **2006 NGS CORS Forum @ CGSIC**
- **International NTRIP Symposium (BKG)**
- **Trade/User Conferences**
- **US Chamber of Commerce**
- **International Conferences and Visiting Study Groups**
- **PNT Architecture Workshops**
- **Presentations for Representatives and Staffers**



Issues Facing RTN Developers

Action Items

Geodesy - Reference Framework



- **Guidelines Sought**
- **NGS Real-Time-Network Team**
- **NGS Guidelines for CORS**
- **International Examples (e.g. SAPOS)**



Issues Facing RTN Developers

Action Items

Outreach & Education

ACSM Seminars – RTN Fundamentals



The Reality of Real-Time

LARRY SIGNANI & GAVIN SCHROCK
Washington State Section ACSM
Washington State Reference Network

Kansas City Metro Surveyors Association
Kansas City, MO – March 16th, 2007



Issues Facing RTN Developers

Action Items

Outreach & Education

RTN101 – Article Series

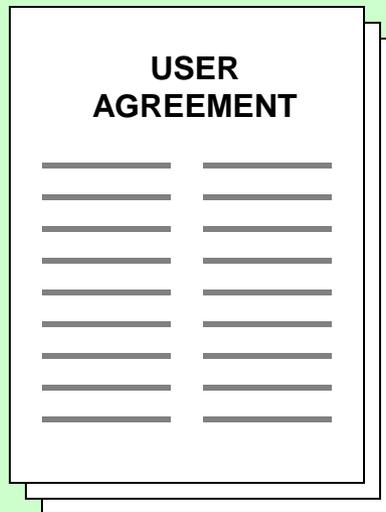


Issues Facing RTN Developers

Action Items

Business Model Boilerplates

User Agreements

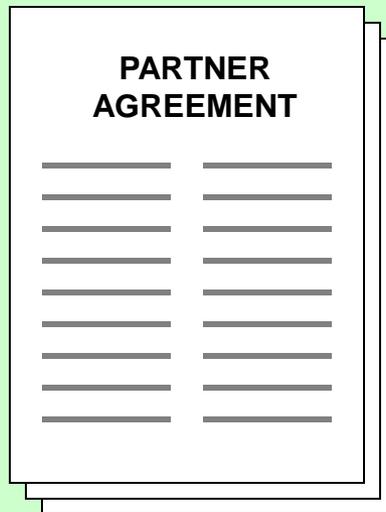


Issues Facing RTN Developers

Action Items

Business Model Boilerplates

Partnership Agreements

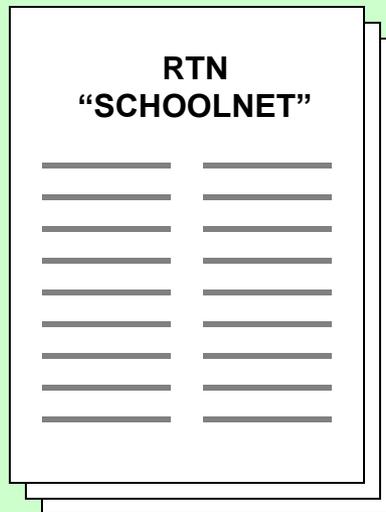


Issues Facing RTN Developers

Action Items

Business Model Boilerplates

School Sites



**“Schoolnet” Model
Similar to School
Cooperative
Meteorological
Sites**

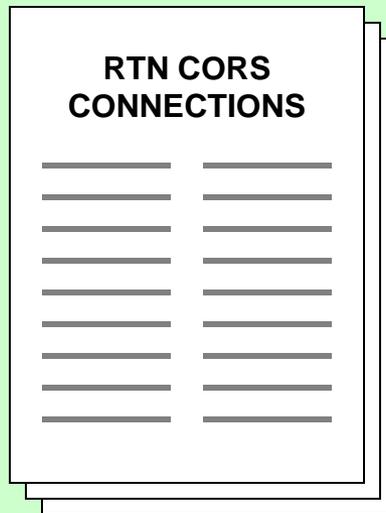


Issues Facing RTN Developers

Action Items

Business Model Boilerplates

Communications – IT Guidelines



Issues Facing RTN Developers

Action Items

Business Model Boilerplates

Cost-Benefit Analyses



| RTN | |
|--------------|-------|
| COST_BENEFIT | |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |



Issues Facing RTN Developers

Action Items

Policy Considerations

Representatives and Staffer Suggestions



- **Consistency in Agency Site Policy**
- **Evaluation of Application**
- **Existing CORS Access and Upgrades**
- **Project Based Participation**
- **Security Policy**



Issues Facing RTN Developers

Action Items

Policy Considerations

Consistency in Agency Site Policy



Issues Facing RTN Developers

Action Items

Policy Considerations

Evaluation of Application



*Continue to bear costs of
conventional methods
without question?*

Issues Facing RTN Developers

Action Items

Policy Considerations

Evaluation of Application



*Would investments in local
or regional RTN reduce
total project costs?*

Issues Facing RTN Developers

Action Items

Policy Considerations

Existing CORS Access and Upgrades



Should there be open access to real-time data from existing CORS?



Should new CORS be dual-frequency

Should existing single-frequency CORS be upgraded to dual-frequency

Issues Facing RTN Developers

Action Items

Policy Considerations

Security Risk?



*RTN are not an additional
security risk...*

Official statement needed



On-Grid Proposed Actions



Programs? Bill? Directives? Bake-Sales?

On-Grid participants have been very effective in articulating their needs, but need a lot of help in framing any national level actions...

On-Grid

Most potential RTN participants experience some level of resistance seeking authorization from above...

Often the higher authorities are simply waiting for an OK from even higher authorities...

Sometimes it is as simple as hearing those three magic words:

This is Cool!





Thank You!

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